

Appl. No. 10/715,791  
Amdt. Dated June 16, 2008  
Reply to Final Office Action of April 16, 2008

RECEIVED  
CENTRAL FAX CENTER  
JUN 16 2008

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (previously presented) A method of dynamically managing a computer system having a plurality of processors, comprising:  
identifying a first set of computer-readable instructions;  
assigning the first set of computer-readable instructions to at least one of said plurality of processors using an affinity mask; and  
automatically adjusting the number of processors assigned to said first set of instructions by adding or removing a processor to or from the affinity mask based on processor usage in the system, the processor being removed from the affinity mask in a reverse order that the processor is added to the affinity mask.
2. (original) The method of claim 1 wherein the first set of computer-readable instructions comprise a computing thread.
3. (original) The method of claim 1 wherein the first set of computer-readable instructions comprise an application program.
4. (original) The method of claim 1 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.
5. (previously presented) The method of claim 4 wherein the CPU utilization is normalized for the CPUs in the number of processors eligible to execute the first set of instructions.
6. (previously presented) The method of claim 1 further comprising identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group.
7. (previously presented) The method of claim 6 wherein the application group is assigned to a common set of processors whose number is automatically adjusted.

Appl. No. 10/715,791  
Amdt. Dated June 16, 2008  
Reply to Final Office Action of April 16, 2008

8. (currently amended) The method of claim 1 wherein said first set of computer readable instructions are elevated in priority class before ~~estimating the processor usage~~ automatically adjusting the number of processors.

9. (previously presented) The method of claim 1 wherein the processor usage comprises an average processor usage taken over a predefined interval.

10. (previously presented) The method of claim 1 where the act of automatically adjusting the number of processors compares the processor usage to a threshold value.

11. (previously presented) The method of claim 10 wherein the threshold value for adding a processor is above about 85% of CPU utilization on the processors that the first set of instructions is executing on.

12. (currently amended) The method of claim 10 wherein the threshold value is for deleting a processor is below about 65% of CPU utilization on the processors that the first set of instructions is executing on.

13. (previously presented) A system for dynamically managing a computer system having a plurality of processors, comprising:

at least one processor;

a computer memory device in communication with said at least one processor bearing computer-executable instructions capable of identifying a first set of computer-readable instructions;

a computer memory device in communication with said at least one processor bearing computer-executable instructions capable of assigning the first set of computer-readable instructions to at least one of said plurality of processors; and

a computer memory device in communication with said at least one processor bearing computer-executable instructions capable of automatically adjusting the number of processors assigned to said first set of instructions by adding or removing a processor to or from the affinity mask based on processor usage in the system, the processor being removed from the affinity mask in a reverse order that the processor is added to the affinity mask.

Appl. No. 10/715,791  
Amdt. Dated June 16, 2008  
Reply to Final Office Action of April 16, 2008

14. (original) The system of claim 13 wherein the first set of computer-readable instructions comprise a computing thread.

15. (original) The system of claim 13 wherein the first set of computer-readable instructions comprise an application program.

16. (original) The system of claim 13 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.

17. (previously presented) The system of claim 16 wherein the CPU utilization is normalized for the CPUs in the number of processors eligible to execute the first set of instructions.

18. (previously presented) The system of claim 13 further comprising a computer memory device in communication with said at least one processor bearing computer executable instruction capable of identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group.

19. (original) The system of claim 18 wherein the application group is assigned to a common set of processors whose number is automatically adjusted.

20. (currently amended) The system of claim 13 wherein said first set of computer readable instructions are elevated in priority class before ~~estimating the processor usage~~ automatically adjusting the number of processors.

21. (original) The system of claim 13 wherein the processor usage comprises an average processor usage taken over a predefined interval.

22. (original) The system of claim 13 where the computer memory device bearing computer-executable instructions capable of automatically adjusting the number of processors is capable comparing the processor usage to a threshold value.

23. (previously presented) An article of manufacture comprising:  
a computer-readable storage medium bearing computer-readable instructions of dynamically managing a computer system having a plurality of processors, comprising:

Appl. No. 10/715,791  
Amdt. Dated June 16, 2008  
Reply to Final Office Action of April 16, 2008

instructions for identifying a first set of computer-readable instructions;  
instructions for assigning the first set of computer-readable instructions to at least one of said plurality of processors; and  
instructions for automatically adjusting the number of processors assigned to said first set of instructions by adding or removing a processor to or from the affinity mask based on processor usage in the system, the processor being removed from the affinity mask in a reverse order that the processor is added to the affinity mask.

24. (previously presented) The article of manufacture of claim 23 wherein the first set of computer-readable instructions comprise a computing thread.

25. (previously presented) The article of manufacture of claim 23 wherein the first set of computer-readable instructions comprise an application program.

26. (previously presented) The article of manufacture of claim 23 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.

27. (previously presented) The article of manufacture of claim 26 wherein the CPU utilization is normalized for the CPUs in the number of processors eligible to execute the first set of instructions.

28. (previously presented) The article of manufacture of claim 26 comprising instructions for identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group.

29. (previously presented) The article of manufacture of claim 28 wherein the application group is assigned to a common set of processors whose number is automatically adjusted.

30. (currently amended) The article of manufacture of claim 23 comprising instructions for elevating said first set of computer readable instructions in priority class before ~~estimating the processor usage~~ automatically adjusting the number of processors.

31. (previously presented) The article of manufacture of claim 23 wherein the processor usage comprises an average processor usage taken over a predefined interval.

Appl. No. 10/715,791  
Amdt. Dated June 16, 2008  
Reply to Final Office Action of April 16, 2008

32. (previously presented) The article of manufacture of claim 23 where the instructions for automatically adjusting the number of processors compares the processor usage to a threshold value.